

AMENDMENTS TO THE CLAIMS:

This following listing of claims replaces all prior versions, and listings, of claims in this application.

LISTING OF CLAIMS:

1–7. (Canceled)

8. (Original) A method of manufacturing a rigid internal gear of a wave gear device, in which the rigid internal gear comprises a main gear ring and a tooth-forming ring having internal teeth formed on an inner circumferential surface thereof and, in which the tooth-forming ring is disposed inside the main gear body and integrally bonded thereto,

the method comprising steps of:

forming the main gear ring from a first material that has a low linear expansion coefficient;

forming the tooth-forming ring from a second material that has a high linear expansion coefficient; and

pressing the tooth-forming ring into an inside of the main gear ring and diffusion-combining the tooth-forming ring and the main gear ring.

9. (Original) A method of manufacturing a rigid internal gear according to Claim 8,

wherein the first material is a titanium alloy with a linear expansion coefficient of approximately 8.8×10^{-6} , and

the second material is a ferrous material with a linear expansion coefficient of approximately 12.0×10^{-6} .

10. (Original) A method of manufacturing a rigid internal gear according to Claim 8,

wherein the first material is a ceramic material with a linear expansion coefficient of approximately 7.8×10^{-6} , and

the second material is a stainless steel material with a linear expansion coefficient of approximately 17.0×10^{-6} .

11. (Original) A method of manufacturing a rigid internal gear according to Claim 8,

wherein the first material is an aluminum alloy with a linear expansion coefficient in a range of 6.2×10^{-6} to 10.0×10^{-6} , and

the second material is an aluminum alloy with a linear expansion coefficient in a range of 20×10^{-6} to 24×10^{-6} .

12. (Previously Presented) A method of manufacturing a rigid internal gear according to Claim 8, wherein an inner circumferential surface of the main gear ring is tapered,

an outer circumferential surface of the tooth-forming ring is tapered so that the tooth-forming ring can be pressed into the tapered inner circumferential surface of the main gear ring, and

the tooth-forming ring is pressed onto the inner circumferential surface of the main gear ring and the tooth-forming ring and main gear ring are diffusion-bonded together.

13. (Previously Presented) A method of manufacturing a rigid internal gear according to Claim 8, wherein a gear cutting process for forming the internal teeth on the tooth-forming ring is performed after the tooth-forming ring has been joined to the main gear ring to form a single body.

14. (Previously Presented) A rigid internal gear of a wave gear device manufactured by a method of manufacturing according to Claim 8.

15-18. (Canceled)

19. (New) A method of manufacturing a rigid internal gear of a wave gear device, in which the rigid internal gear comprises a main gear ring and a tooth-forming ring having internal teeth formed on an inner circumferential surface thereof and, in which the tooth-forming ring is disposed inside the main gear body and integrally bonded thereto,

the method comprising steps of:

forming the main gear ring from a first material that has a first linear expansion coefficient;

forming the tooth-forming ring from a second material that has a second linear expansion coefficient; and

pressing the tooth-forming ring into an inside of the main gear ring and
diffusion-combining the tooth-forming ring and the main gear ring;

wherein the first linear expansion coefficient is lower than the second linear
expansion coefficient.

20. (New) A method of manufacturing a rigid internal gear according to
Claim 19,

wherein the first material is a titanium alloy with a linear expansion coefficient
of approximately 8.8×10^{-6} , and

the second material is a ferrous material with a linear expansion coefficient of
approximately 12.0×10^{-6} .

21. (New) A method of manufacturing a rigid internal gear according to
Claim 19,

wherein the first material is a ceramic material with a linear expansion
coefficient of approximately 7.8×10^{-6} , and

the second material is a stainless steel material with a linear expansion
coefficient of approximately 17.0×10^{-6} .

22. (New) A method of manufacturing a rigid internal gear according to
Claim 19,

wherein the first material is an aluminum alloy with a linear expansion
coefficient in a range of 6.2×10^{-6} to 10.0×10^{-6} , and

the second material is an aluminum alloy with a linear expansion coefficient in a range of 20×10^{-6} to 24×10^{-6} .

23. (New) A method of manufacturing a rigid internal gear according to Claim 19, wherein an inner circumferential surface of the main gear ring is tapered, an outer circumferential surface of the tooth-forming ring is tapered so that the tooth-forming ring can be pressed into the tapered inner circumferential surface of the main gear ring, and

the tooth-forming ring is pressed onto the inner circumferential surface of the main gear ring and the tooth-forming ring and main gear ring are diffusion-bonded together.

24. (New) A method of manufacturing a rigid internal gear according to Claim 19, wherein a gear cutting process for forming the internal teeth on the tooth-forming ring is performed after the tooth-forming ring has been joined to the main gear ring to form a single body.

25. (New) A rigid internal gear of a wave gear device manufactured by a method of manufacturing according to Claim 19.